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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Application of  
David W. Manning, et al.

Serial No.: 10/624,360

Filed: July 22, 2003

Title: BATTERY-POWERED SEWER  
AND DRAIN CLEANER

Group No.: 1744

BEFORE THE BOARD  
OF PATENT APPEALS  
AND INTERFERENCES

Appeal No. \_\_\_\_\_

APPELLANTS' AMENDED APPEAL BRIEF

Commissioner for Patents  
Alexandria, VA 22313

Dear Sir:

REAL PARTIES IN INTEREST

The Appellants have not assigned any of their rights; therefore, the real parties in interest are David W. Manning and John A. Kline.

RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences related to this case.

STATUS OF THE CLAIMS

This is an appeal of the Examiner's final rejection of claims 1-8. Claim 1 is an independent claim with claims 2-8 ultimately depending therefrom. Appellants believe that each of the claims is individually allowable and stands by itself.

## STATUS OF AMENDMENTS

The Examiner entered a final rejection of Appellants' claims on November 25, 2005. Appellants did not file an Amendment After Final Rejection.

## SUMMARY OF THE CLAIMED SUBJECT MATTER

The invention defined in the only independent claim (claim 1) is a battery-powered sewer and drain cleaner (10) as shown in Fig. 2. Claim 1 describes that the cleaner 10 includes a frame 12 (page 3, lines 9-10) having a rotatable drum 16 mounted thereon which has a flexible plumbers snake 18 associated therewith (page 3, lines 14-15). A DC motor 20 is mounted on the frame 12 (page 3, lines 16-17) and has a driven shaft which is connected to the drum 16 for rotating the same. A rechargeable battery 22 mounted on the frame 12 for powering the DC motor 20 (page 3, lines 20-21). A control 24 is connected to the DC motor for controlling the operation thereof (page 3, lines 21-22).

Each of claims 2-8 are believed to be allowable but do not include any means-plus-function limitations pursuant to 35 U.S.C. § 112(6).

## GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Salecker 5,309,595 (hereinafter "Salecker") in view of Block 6,448,732 (hereinafter "Block"). The Examiner concluded that it would have been obvious to one of ordinary skill in the art to have provided Salecker's cleaner with a motor that receives power from direct current provided by an onboard rechargeable battery, as taught by Block, to aid in easing portability of the entire cleaner device by avoiding

1 the need for long extension cords leading to electrical outlets and enabling the  
battery to be recharged for prolonged usage and extending its useful life. The  
Examiner believes that Block's teaching gives users a choice of either power source.

5 The Examiner also addressed claims 2, 3, 4, 5, 6 and 7 and stated that the  
structure recited in those claims would have been obvious to a person of ordinary  
skill in the art.

10 Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over  
Salecker in view of Block, as applied to claim 1, and further in view of Babb  
4,218,802 (hereinafter "Babb").

15 The Examiner stated that with respect to claim 8 it would have been obvious to  
one of ordinary skill in the art to have provided the modified Salecker device with a  
motor that has sufficient torque and shaft speed to rotate the drum at approximately  
230-350 rpm, as taught by Babb, for ensuring a clearing out of drain or sewer  
obstructions. The Examiner concluded that in any case, selection of an optimum or  
workable specific value or range of values for torque and shaft speed involves routine  
skill in the art to ensure clearing out of larger sewer or drain obstructions.

#### ARGUMENT

20 (A) Whether claim 1 is unpatentable over Salecker in view of Block  
pursuant to 35 U.S.C. § 103(a).

25 In the final rejection, the Examiner stated that with respect to claim 1, the  
patent to Salecker discloses all of the recited subject matter with the exception of a  
battery-powered cleaner device comprising a motor that is a DC and a rechargeable

1 battery mounted on the frame for powering the DC motor. The Examiner also stated  
that the patent to Block teaches a cleaner device which comprises a motor 40 which  
can operate in either of two modes, namely, via power supplied from an onboard  
rechargeable battery or from AC from a fixed AC power outlet. The Examiner  
5 concluded that it would have been obvious to one of ordinary skill in the art to have  
provided Salecker's cleaner with a motor that receives power from direct current  
provided by an onboard rechargeable battery, as taught by Block, to aid in easing  
portability of the entire cleaner device by avoiding the need for long extension cords  
leading to electrical outlets and enabling the battery to be recharged for prolonged  
10 usage and extending its useful life. The Examiner further stated that the teaching of  
Block clearly discloses that it is old and well known to operate a portable powered  
cleaner device motor by either power received from alternating current from a fixed  
power source or from direct current provided by an onboard rechargeable battery.  
15 The Examiner concluded that the teaching of Block simply gives users the choice of  
either power source mode.

In the rejection, the Examiner stated that the patent to Salecker discloses all of  
the recited subject matter with the exception of a battery-powered cleaner device  
20 comprising a motor that is DC and a rechargeable battery mounted on the frame for  
powering the DC motor. Appellants agree with the Examiner's assessment of  
Salecker since Salecker is a typical sewer and drain cleaner. Appellants do not claim  
to be the first inventors of a sewer and drain cleaner, but do believe that they are the  
first persons to provide a battery-powered sewer and drain cleaner.  
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1           The Examiner has attempted to combine the teachings of Block with the  
teachings of Salecker in an effort to make Appellants' battery-powered sewer and  
drain cleaner obvious under 35 U.S.C. § 103(a). In an effort to justify the  
combination of Salecker and Block, the Examiner has brushed aside the fact that  
5   Appellants' invention is a sewer and drain cleaner by stating that Block is a cleaner  
device. Block is a cleaner device, but it is a portable suction cleaner of the vacuum  
cleaner type. There is a vast difference between vacuum cleaners and sewer and  
drain cleaners. Vacuum cleaners remove materials from rugs or the like by suction  
10 while sewer and drain cleaners of the type herein loosen roots, obstructions, etc.,  
within pipes through the use of a flexible plumber's snake which is rotated in the  
clogged pipes. It is therefore contended by Appellants that Block is not analogous  
art. It is not believed that a person working in the sewer and drain cleaning art would  
look to the vacuum cleaner art such as Block. Appellants' contention that Block is  
15 non-analogous art is borne out by the fact that the classifications of Block and  
Salecker are completely different as were the fields of search therein.

In determining the differences between the prior art and the claims, the  
question under 35 U.S.C. § 103 is not whether the differences themselves would  
20 have been obvious, but whether the claimed invention as a whole would have been  
obvious. Stratoflex Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir.  
1983). A prior art reference must be considered in its entirety, i.e., as a whole,  
including portions that would lead away from the claimed invention. W.L. Gore &  
Associates Inc. v. Garlock Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983).  
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1 Distilling an invention down to the "gist" or "thrust" of an invention disregards the requirement of analyzing the subject matter "as a whole." Id.

5 Even more damaging to the Examiner's modification of Salecker is that the Examiner has failed to point out any suggestion or motivation to modify the reference in the manner suggested. MPEP § 2143.01. Obviousness can only be established by combining or modifying the teachings of the prior art to produce a claimed invention where there is some teaching, suggestion, or motivation to do so, found either explicitly or implicitly in the references themselves or in the knowledge  
10 generally available to one of ordinary skill in the art. Id. In In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000), the Federal Circuit decided that the control of multiple valves by a single sensor rather than by multiple sensors was a technologically simple concept. However, the Federal Circuit held that there was no finding as to the specific understanding or principle within the knowledge of  
15 the skilled artisan that would have provided the motivation to use a single sensor as the system to control more than one valve. Id.

The mere fact that a reference can be modified does not render the resulting modification obvious unless the prior art also suggests the desirability of the  
20 modification. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). "A statement that modifications of the prior art to meet the claimed invention would have been 'well within the ordinary skill of the art at the time that the claimed invention was made because the references relied upon teach that all aspects of the claimed invention were individually known in the art' is not sufficient to establish a *prima facie*  
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1 case of obviousness...." Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993).

5 Regarding the present invention, the Examiner has failed to show any suggestion or motivation to modify the Salecker reference. Therefore, Appellants assert that the structure of claim 1 would not have been obvious to one having ordinary skill in the art at the time of the invention pursuant to 35 U.S.C. § 103(a). Appellants contend that the electrocution hazard involved with AC sewer and drain cleaners has been widely recognized for many years, but Appellants are believed to be the first persons to ever develop a battery-driven sewer and drain cleaner such as set forth in claim 1. Suddenly, due to 20/20 hindsight, the Examiner believes that Appellants' battery-powered sewer and drain cleaner as set forth in claim 1 would have been obvious, although the Examiner has been unable to find a single piece of prior art wherein a sewer and drain cleaner has been controlled and driven by a low voltage DC motor.

15 (B) Whether claim 2 is unpatentable over Salecker in view of Block pursuant to 35 U.S.C. § 103(a).

20 Claim 2 is dependent on claim and adds the limitation thereto that the DC motor is operatively connected to the drum by a belt drive. Even though Salecker does teach that a belt drive is utilized, the motor of Salecker is not a DC motor. Inasmuch as neither Salecker nor Block even remotely suggest that a DC motor could be used on a sewer and drain cleaner of the type described, claim 2 is believed

1 to be allowable over Salecker and Block. Claim 2 is also believed to be allowable for the reasons set forth with respect to claim 1.

(C) Whether claim 3 is unpatentable over Salecker in view of Block pursuant to 35 U.S.C. § 103(a).

5 Claim 3 depends from claim 1 and adds the limitation thereto that the DC motor is operatively connected to the drum by a gear drive. Inasmuch as Salecker does not teach a DC motor and does not teach that the drum could be driven by a gear drive, Appellants submit that claim 3 is allowable over Salecker and Block inasmuch as there is absolutely no suggestion or teaching that the Salecker sewer and drain cleaner could be driven by DC motor which was operatively connected to the drum by a gear drive. Accordingly, claim 3 is believed to be allowable as set forth herein and for the reasons set forth above with respect to claim 1.

15 (D) Whether claim 4 is unpatentable over Salecker in view of Block pursuant to 35 U.S.C. § 103(a).

20 Claim 4 depends from claim 1 and adds the limitation thereto that the battery comprises a battery pack. There is absolutely no suggestion in Salecker that a sewer and drain cleaner could be driven by a DC battery, let alone a DC battery pack. The suggested modification of Salecker by means of the Block reference does not make Appellants' structure obvious to a person having ordinary skill in the art at the time of the invention under 35 U.S.C. § 103(a). Claim 4 is also believed to be allowable for the reasons set forth above with respect to claim 1.



1 (E) Whether claim 5 is unpatentable over Salecker in view of Block  
pursuant to 35 U.S.C. § 103(a).

5 Claim 5 depends from claim 1 and adds the limitation thereto that the DC  
motor comprises a high speed, high torque motor. There is no mention whatsoever  
in Salecker that the motor therein is a high speed, high torque motor. Further, there  
is no mention whatsoever in Block that the motor therein could be a high speed, high  
torque motor. Accordingly, as the references of record do not remotely teach or  
suggest that the Salecker machine could be battery-operated, there can be no  
teaching or suggestion that a DC motor could be used with a high speed, high torque  
10 motor. A high speed, high torque motor is necessary to achieve the proper drain  
cleaning function. Inasmuch as the prior art is devoid of any teaching that a sewer  
and drain cleaner could be battery-powered, there can be no teaching or suggestion  
that a DC motor would be a high speed, high torque motor. Therefore, the structure  
15 set forth in claim 5 is believed to be allowable over Salecker and Block. Claim 5 is  
also believed to be allowable for the reasons set forth with respect to claim 1.

(F) Whether claim 6 is unpatentable over Salecker in view of Block  
pursuant to 35 U.S.C. § 103(a).

20 Claim 6 depends from claim 1 and adds the limitation thereto that the battery-  
powered sewer and drain cleaner of claim 1 is a low voltage DC motor. Appellants  
incorporate the remarks set forth above in support of their contention that the use of a  
low voltage DC motor to power a battery-powered sewer and drain cleaner would not  
25 have been obvious under 35 U.S.C. § 103(a). Accordingly, claim 6 should be

1 allowed. Claim 6 is also believed to be allowable for the reasons set forth with  
respect to claim 1.

(G) Whether claim 7 is unpatentable over Salecker in view of Block  
pursuant to 35 U.S.C. § 103(a).

5 Claim 7 depends from claim 1 and adds the limitation thereto that the control  
includes a motor and voltage control. Again, there is absolutely no suggestion  
whatsoever in the references of record that a battery-powered sewer and drain  
cleaner could be controlled by a motor and voltage control mechanism. Therefore,  
10 claim 7 is believed to be allowable. Claim 7 is also believed to be allowable for the  
reasons set forth with respect to claim 1.

(H) Whether claim 8 is unpatentable over Salecker in view of Block, as  
applied to claim 1, and further in view of Babb 4,218,802 pursuant to 35 U.S.C. §  
103(a).

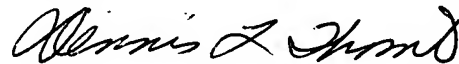
15 Claim 8 depends from claim 1 and adds the limitation thereto that the motor  
has sufficient torque and shaft speed to rotate the drum at approximately 230-350  
rpm. Even though Babb does disclose that output shaft speed is infinitely variable  
between 0 and about 500 rpm, the motor disclosed in Babb is an AC motor. There is  
20 absolutely no teaching or suggestion whatsoever in the three references of record  
that a battery-powered sewer and drain cleaner would have sufficient torque and  
shaft speed to rotate the drum at approximately 230-350 rpm. Inasmuch as the  
references of record do not remotely teach or suggest that the Salecker machine  
could be battery-operated, there can be no teaching or suggestion that a DC motor  
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1 could be used which is a high speed, high torque motor having sufficient torque and  
shaft speed to rotate the drum at approximately 230-350 rpm. Therefore, the  
structure set forth in claim 8 is believed to be allowable over the references of record.  
Claim 8 is also believed to be allowable for the reasons set forth with respect to  
5 claim 1.

### CONCLUSION

The foregoing has clearly shown that each of the claims under consideration is  
not rendered obvious under 35 U.S.C. § 103(a). Accordingly, the Examiner's final  
10 rejection should be reversed.

Respectfully submitted,



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### CERTIFICATE OF MAILING

20 I hereby certify that the original of APPELLANTS' AMENDED APPEAL BRIEF  
for DAVID W. MANNING, ET AL., Serial No. 10/624,360, was mailed by first class  
mail, postage prepaid, to the Mail Stop Appeal Briefs-Patent, Commissioner for  
Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 5<sup>th</sup> day of April,  
2006.



DENNIS L. THOMTE

## CLAIMS APPENDIX

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1. A battery-powered sewer and drain cleaner, comprising:

a frame;

a rotatable drum mounted on said frame which has a flexible plumber's snake

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associated therewith;

a DC motor mounted on said frame;

said motor having a driven shaft operatively connected to said drum for rotating the

same;

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a rechargeable battery mounted on said frame for powering said DC motor;

and a control connected to said DC motor for controlling the operation thereof.

2. The battery-powered sewer and drain cleaner of claim 1 wherein said DC motor is operatively connected to said drum by a belt drive.

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3. The battery-powered sewer and drain cleaner of claim 1 wherein said DC motor is operatively connected to said drum by a gear drive.

4. The battery-powered sewer and drain cleaner of claim 1 wherein said battery comprises a battery pack.

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5. The battery-powered sewer and drain cleaner of claim 1 wherein said motor comprises a high speed, high torque motor.

6. The battery-powered sewer and drain cleaner of claim 1 wherein said motor is a low voltage DC motor.

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7. The battery-powered sewer and drain cleaner of claim 1 wherein said control includes a motor and voltage control.

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8. The battery-powered sewer and drain cleaner of claim 1 wherein said motor has sufficient torque and shaft speed to rotate said drum at approximately 230-350 rpm.

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EVIDENCE APPENDIX

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None.

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RELATED PROCEEDINGS APPENDIX

None.